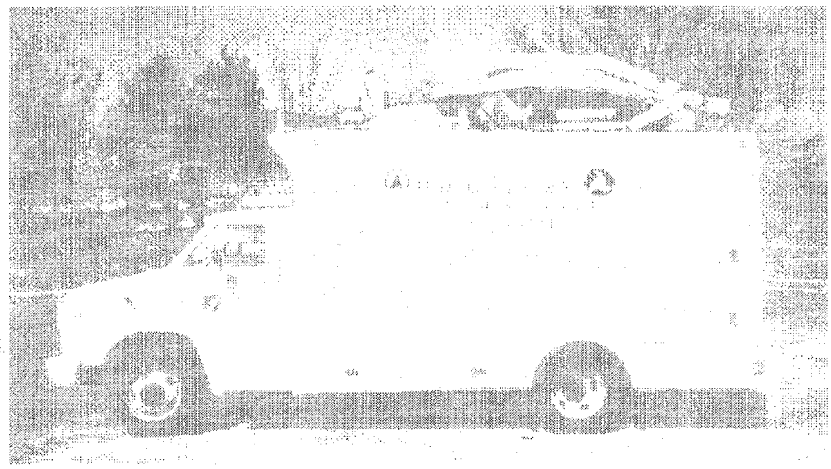
# APPENDIX H

## Training Course Outline



# PENNDOT PROJECT TRAINING.

## OUTLINE

**PART I** - THEORY OFSATELLITE **COMMUNICATIONS OPERATIONS**

**PART II** - VSAT EARTH STATIONS

**PART III** - PENN-DOT SAT SYSTEM OPERATION

**PART IV** - MOBILE PLATFORM OPERATION

**PART V - COMMONLY USED SATCOM TERMINOLOGY**

# PENNDOT PROJECT TRAINING

# PART I

Theory of Satellite Communications Operation

- **About The Satellite**
- Benefits of Using Satellites for Communications
- Components of a Satellite Network
- Commonly Used SATCOM Equipment

# PENNDOT PROJECT TRAINING

# PART II

**VSAT Earth** Stations

- VSAT (Very Small Aperture Terminals) are earth **stations with antenna sizes less than about 4** meter in diameter
- VSAT stations have simplified electronics and interface connections
- **The PENNDOT SAT system is an example of a** typical VSAT network
- **The PENNDOT SAT system consists of:**
  - **The Mini-Hub Earth Station**
  - **The Remote Camera Earth Stations**
  - **The Mobile Platform**

# PART III

PENN-DOT Satellite Network System Operation

- System Functional Description
- Major System Components
- Camera View Switching
- Network Management System

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# PART IV

Mobile Platform

- **Functional Operation of the Truck**
- Functional Operation of the Power System
- Antenna Operation and Alignment
- Telescope Mast and Camera System
- GPS **and Compass Operation**
- **Maintenance**

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# PART V

## Commonly Used SATCOM Terminology